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ACC029-07

Room:102

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## A 274-year environmental record of from Aurora Peak ice core, Alaska.

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We drilled a 180m ice core from Alaska range in Alaska in 2008. Our chemical analysis of the ice core indicated the followings: (1) Age of the ice core was estimated with annual counting of delta-D seasonal cycles, and reference signals of eruptions Mts. Spurr and Katmai and tritium. (2) Annual average values of delta-D did not correlated with annual precipitation observed at several weather stations in Alaska, but with variation of PDO (Pacific Decadal Oscillation) index. (3) Annual accumulation rate estimated by seasonal cycle of delta D increased slightly from the beginning of 1900s, and increased remarkably from 1970s. Because the concentrations of sea salt also increased from 1970s, the increase of precipitation from 1970s can be caused by enhancement of storm activities in winter at Gulf of Alaska. (4) Increase of NH<sub>4</sub>, NO<sub>3</sub>, K originated from biomass burning from 1950s can indicate increase of frequency of wildfire in Alaska.

Keywords: ice core, Alaska, environmental change, hydrogen isotope